

What Is Claimed Is:

1 1. A fuse structure, comprising:
2 an optimal position of laser spot defined above a
3 substrate;
4 a first conductive layer formed on part of the substrate;
5 a dielectric layer formed on the substrate and the first
6 conductive layer;
7 a second conductive layer comprising the position of laser
8 spot formed on part of the dielectric layer;
9 a third conductive layer formed on the part of the
10 dielectric layer placed above the first conductive layer,
11 wherein the third conductive layer is insulated from the first
12 and second conductive layers; and
13 at least one conductive plug penetrating the dielectric
14 layer, to electrically connect the first conductive layer and
15 the second conductive layer.

1 2. The fuse structure according to claim 1, wherein the
2 material of the first conductive layer is tungsten.

1 3. The fuse structure according to claim 1, wherein the
2 material of the second conductive layer is Al, AlCu alloy or
3 poly-silicon.

1 4. The fuse structure according to claim 1, wherein the
2 material of the third conductive layer is Al, AlCu alloy or
3 poly-silicon.

1 5. The fuse structure according to claim 1, wherein the
2 material of the dielectric layer is SiO₂.

1 6. The fuse structure according to claim 1, wherein the
2 material of the conductive plug is tungsten.

1 7. The fuse structure according to claim 1, further
2 comprising a passivation layer having a window formed on the
3 second conductive layer and the third conductive layer;

4 wherein the window exposes the second conductive layer
5 comprising the position of laser spot, part of the third
6 conductive layer and part of the dielectric layer.

1 8. The fuse structure according to claim 7, wherein the
2 material of the passivation layer is PE-TEOS SiO₂ or SiN.

1 9. A fuse window having a plurality of fuse structures,
2 each of the fuse structures comprising:

3 an optimal position of laser spot defined above a
4 substrate;

5 a first conductive layer formed on part of the substrate;
6 a dielectric layer formed on the substrate and the first
7 conductive layer;

8 a second conductive layer comprising the position of laser
9 spot formed on part of the dielectric layer;

10 a third conductive layer formed on the part of the
11 dielectric layer placed above the first conductive layer,
12 wherein the third conductive layer is insulated from the first
13 and second conductive layer; and

14 at least one conductive plug penetrating the dielectric
15 layer, for electrically connecting the first conductive layer
16 and the second conductive layer;

17 wherein each of the fuse structures has its own position
18 of laser spot on the second conductive layer, and the fuse
19 structures are insulated from one another, and the laterals of
20 the second conductive layer having the position of laser spot
21 of any the fuse structures correspond to the third conductive
22 layer of the adjoining fuse structure.

1 10. The fuse window according to claim 9, wherein the
2 material of the first conductive layer is tungsten.

1 11. The fuse window according to claim 9, wherein the
2 material of the second conductive layer is Al, AlCu alloy or
3 poly-silicon.

1 12. The fuse window according to claim 9, wherein the
2 material of the third conductive layer is Al, AlCu alloy or
3 poly-silicon.

1 13. The fuse window according to claim 9, wherein the
2 material of the dielectric layer is SiO₂.

1 14. The fuse window according to claim 9, wherein the
2 material of the conductive plug is tungsten.

1 15. A fuse structure, comprising:
2 an optimal position of laser spot defined above a
3 substrate;

4 a first conductive layer formed on part of the substrate;
5 a dielectric layer formed on the substrate and the first
6 conductive layer;
7 a second conductive layer comprising the position of laser
8 spot formed on the dielectric layer; and
9 at least one conductive plug penetrating the dielectric
10 layer, to electrically connect the first conductive layer and
11 the second conductive layer.

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15 16. The fuse structure according to claim 15, wherein the
16 material of the first conductive layer is tungsten.
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20 17. The fuse structure according to claim 15, wherein the
21 material of the second conductive layer is Al, AlCu alloy or
22 poly-silicon.
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25 18. The fuse structure according to claim 15, wherein the
26 material of the dielectric layer is SiO₂.

27 19. The fuse structure according to claim 15, wherein the
28 material of the conductive plug is tungsten.

29 20. The fuse structure according to claim 15, further
30 comprising a passivation layer having a window formed on the
31 second conductive layer;

32 wherein the window exposes the second conductive layer
33 comprising the position of laser spot.

34 21. The fuse structure according to claim 20, wherein the
35 material of the passivation layer is PE-TEOS SiO₂ or SiN.

1 22. A fuse window having a plurality of fuse structures,
2 Each fuse structure comprising:
3 an optimal position of laser spot defined above a
4 substrate;
5 a first conductive layer formed on part of the substrate;
6 a dielectric layer formed on the substrate and the first
7 conductive layer;
8 a second conductive layer comprising the position of laser
9 spot formed on part of the dielectric layer; and
10 at least one conductive plug penetrating the dielectric
11 layer, to electrically connect the first conductive layer and
12 the second conductive layer;
13 wherein each fuse structure has its own the position of
14 laser spot on the second conductive layer, and the fuse
15 structures are insulated from one another, and the laterals of
16 the portion of the second conductive layer having the position
17 of laser spot of any the fuse structure correspond to the portion
18 of the second conductive layer having no position of laser spot
19 of the adjoining fuse structure.

1 23. The fuse window according to claim 22, wherein the
2 material of the first conductive layer is tungsten.

1 24. The fuse window according to claim 22, wherein the
2 material of the second conductive layer is Al, AlCu alloy or
3 poly-silicon.

1 25. The fuse window according to claim 22, wherein the
2 material of the dielectric layer is SiO₂.

1 26. The fuse window according to claim 22, wherein the
2 material of the conductive plug is tungsten.

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